

Jamesoniella autumnalis, which are marked in the Preliminary List with the sign “—,” may now be marked with the sign “+.” The Maine record for *Jungermannia pumila*, however, seems to have been based on an incorrect determination and ought to be stricken out.

Making the additions and subtractions as indicated above, the census of New England Hepaticae would stand as follows: Total number of species recorded, 135; number recorded from Maine, 83; from New Hampshire, 103; from Vermont, 81; from Massachusetts, 80; from Rhode Island, 64; from Connecticut, 96; from each of the six states, 35.

YALE UNIVERSITY.

TWO VARIATIONS OF CAREX GLAREOSA.

M. L. FERNALD.

ONE of the most characteristic sedges of brackish shores of the Gulf of St. Lawrence and of the broad estuary of the River is a small caespitose plant which ordinarily passes as *Carex glareosa* Wahlenb. There, in eastern Quebec and New Brunswick, the ordinary phase of the plant agrees with most of the arctic material and that of Scandinavia in having plump plano-convex broadly ellipsoid, ovoid or obovoid perigynia which usually taper abruptly to the short beak. A variation of the plant which is less common, and known to the writer only from Cacouna and Bic on the River St. Lawrence differs constantly in having fusiform perigynia which taper gradually to each end. Aside from the plants of Cacouna and Bic the only specimens in the Gray Herbarium with such narrow perigynia are two sheets from Sweden and one from Finland.

As these two phases of *Carex glareosa* occur in eastern Canada, they are well marked and very constant extremes, each occupying by itself large areas of brackish sandy or gravelly shore. At Cacouna and at Bic the plant with slender perigynia alone has been found, while at Rivière du Loup, Dalhousie, Escuminac, Bonne Espérance, and at numerous other places, the plant with short ovoid or obovoid perigynia appears to be the sole representative of the species.

As already intimated, this broad-fruited plant is generally much better known than the other, and as shown by herbarium-specimens

it is the plant of Greenland, Alaska, the Behring Sea region, and of Spitzbergen and much of the Scandinavian and Finnish coast. In fact, the narrow-fruited plant is apparently so local that in most modern accounts of *Carex glareosa* it has received little or no recognition. Thus in Flora Danica, in 1865, the plant is described with perigynium "oblongo-ovali"¹ and in the beautiful colored plate the perigynium is shown three-fifths as broad as long. In Boott's Illustrations, in 1867, the plate² agrees with that in Flora Danica in showing as *C. glareosa* the plant with ovoid perigynia; and in Ostenfeld's Flora Arctica, in 1902, the plant is said to have the "utricles ovate,"³ and the figure shows the utricle (perigynium) more than half as broad as long.

When, however, we compare with this commoner tendency of *Carex glareosa* the original description⁴ and figure⁵ of the species, we find that Wahlenberg's plant was not the form with ovoid perigynia so generally treated as *C. glareosa*, but the narrow-fruited and ordinarily less common plant. The original "capsulis oblongis acuminatis" indicates this, and the evidence is strengthened by the colored plate in Schkuhr, which shows a perigynium only one-third as broad as long; and the fact that both the Swedish specimens in the Gray Herbarium come from the Gulf of Bothnia, one from Bygdeå in Westerbotten and the other from the same region (the old district of Norrland) is at least a good indication that Schkuhr's beautiful illustration represents a characteristic plant of that coast.

From their manner of occurrence in eastern Canada, the two extremes seem clearly distinct, but since they apparently have no other distinguishing characters than the shape of their perigynia, they should be treated only as varieties of one species. These with their distribution as known to the writer may be summarized as follows:

CAREX GLAREOSA Wahlenb. Plant densely caespitose, weak and lax, the usually curved culms nearly filiform: leaves blue-green, flaccid, 0.5–1.5 mm. broad, plicate or involute: spikes 2 to 4, subapproximate, appressed-ascending, obovoid; the lower 4–9 mm. long, 2.5–4 mm.

¹ Fl. Dan. xiv. t. 2430 (1865).

² Boott, Ill. iv. t. 494 (1867).

³ Ostenfeld, Fl. Arct. 58, fig. 28 (1902).

⁴ "C. glareosa: spiculis ternis terminali basi mascula subconfertis oblongis, squamis aequantibus, capsulis oblongis acuminatis convexissimo-planis subacutangulis nervosis; foliis angustissimis intimo multum breviore, culmo flaccido. C. glareosa mihi SCHKUHR; Car. tab. Aaa. fig. 97. Hab. in littoribus marinis glareosis Norvegiae septentrionalis, & ad Sinum Botnicum." — Wahlenb. Act Holm. xxiv. 146 (1803)

⁵ Schkuhr, Riedgr. Nachtr. 24, t. Aaa, fig. 97 (1806).

thick; the terminal larger, including the staminate base 6–11 mm. long: perigynia pale brown or drab, plano-convex, fusiform, tapering very gradually to the smooth beak and the shorter substipitate base, prominently striate-nerved, 2.5–3 mm. long, barely 1 mm. broad, distinctly exceeding the acutish or obtuse ferruginous or purplish white-edged scales.—Act. Holm. xxiv. 146 (1803), and in Schkuhr, Riedgr. Nachtr. 24, t. Aaa, fig. 97 (1806).—Very local on wet gravelly or sandy sea-shores, NORWAY, SWEDEN and FINLAND: QUEBEC, damp brackish spots, Bic (*Collins & Fernald*); forming turf in brackish soil by the St. Lawrence, Cacouna (*Collins & Fernald*, no. 41, *Williams*).

Var. **amphigena**, var. nov. Perigyniis late ellipsoideis ovoideis vel obovoideis 2–3 mm. longis 1.3–1.9 mm. latis fere abrupte rostratis.—*Type*, salt-marsh, Escuminac Bay, Escuminac, Bonaventure Co., QUEBEC, June 29, 1904 (*M. L. Fernald*). Examined also from the following stations. LABRADOR, Turnavik Island, August 12, 1896 (*Cornell Party*): QUEBEC, maritime rocks, Bonne Espérance, July 26, 1882 (*J. A. Allen*); crevices of rocks, Watsheeshoo, July, 1882 (*St. Cyr*); Pointe des Monts, June 16, 1862 (*J. Bell*), rocks on coast, Grand Etang, August 1, 1882 (*J. Macoun*); Rivière du Loup, August 4, 1902 (*Williams & Fernald*): NEW BRUNSWICK, low damp spots, Dalhousie, July 4, 1904, (*Fernald*): ALASKA, Shumagin Island, July 15, 1872 (*M. W. Harrington*); Nunivak Island, August 8, 1891 (*J. M. Macoun*): BEHRING STRAITS, Arakamtchetchene Island, 1853–56 (*C. Wright*): GREENLAND, Jacobshavn (*J. Vahl*); Godhavn, 1870 (*Berggren*); Disco, July 24, 1902 (*Porsild*, no. 308): NORWAY, salt-marsh at mouth of River Altenelf, Elvebakka, July 6, 1868 (*Zetterstedt*): SWEDEN, Vesterbotten (*Lehmann*); Hernösand and Gefle (*J. Franzen & K. F. Thedenius*): RUSSIA, Kola, June 26, 1883 (*Hollmén*); Federersk, July, 1885 (*V. F. Brotherus*); Vasa, July, 1880 (*V. F. Brotherus*), June 16, 1884 (*W. Laurén*); Borgå, June 15, 1884 (*K. J. W. Unionius*).—This is *C. glareosa* of most authors, and is well illustrated in *Flora Danica*, xiv. t. 2430 (1865); Boott's Illustrations, iv. t. 494 (1867); and in Ostenfeld's *Flora Arctica*, 58, fig. 28 (1902).

GRAY HERBARIUM.

AN EXTREME FORM OF *BOTRYCHIUM VIRGINIANUM*.—In June, 1905, while attending a field meeting of the Connecticut Botanical